



Region of Waterloo * Paramedic Services **PERFORMANCE MEASUREMENT**

Performance Measurement Report (year-end) For the Period of January – December 2016 Produced on February 9th, 2017

As a result of work related to the Paramedic Services master plan, a number of best practice recommendations were implemented resulting in significant changes to the methodology of this report. Due to these changes, such as switching from counting distinct calls within Waterloo Region to counting vehicle responses by Paramedic Services both inside and outside of Waterloo Region, results and trends in this report are not comparable to previously published reports. Further, throughout this report, the term vehicle response is used. A vehicle response is generated when an ambulance or emergency response unit is dispatched to a call; there can be more than one vehicle response per call (multiple ambulances/emergency response units assigned to the same call; for example multi-casualty incidents).



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Summary

A. Volume and Service Level Indicators

Indicator	Year-end (2015)	Year-end (2016)	Per cent change
Total Number of Vehicle Responses	45,344	48,577	+7.1%
Rate of vehicle responses per 1,000 population*	78.9	82.9	+5.1%
Unit Utilization	40.2%	39.0%	-3.1%

C. Efficiency Indicators

Indicator	Year-end (2015)	Year-end (2016)	Per cent change
Offload Delay*	150.0 days	91.6 days	-38.9%
Code Yellow Time	13.3%	10.5%	-21.6%
Code Red Time	1.1%	0.6%	-42.0%

B. Compliance and Quality Assurance Indicators

Indicator	Year-end (2015)	Year-end (2016)	Per cent change
Paramedic Services Response Time to Emergency Calls	9min 49sec	9min 37sec	-2.0%
Response Time Performance Plan Compliance Resuscitation calls (CTAS1)	68.4%	71.7%	+4.9%
Response Time Performance Plan Compliance Emergent calls (CTAS2)	77.7%	79.0%	+1.6%

D. Service and Quality Impact Indicators

Indicator	Year-end (2015)	Year-end (2016)	Per cent change
Stroke Patient to Stroke Facility*	86.9%	89.7%	3.3%
Return of Spontaneous Circulation*	13.5%	14.1%	4.7%
Heart attack (STEMI) protocol*	62.3%	58.4%	-6.1%

*A similar indicator is captured, with some variation in measurement units, within a portion of the MBNCanada (formerly OMBI) reporting process.



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A. Volume and Service Level Indicators

Definition of Indicator Group

Quantity type indicators that show values related to work intake and work breakdown (how much did we do?).

Summary of Results

Paramedic Services responded to 42,187 calls resulting in 48,577 vehicles responses in 2016 or 82.9 for every 1,000 people. This was; an increase of 7.1 per cent from 2015 and above the five year average (5.1 per cent) and continues to outpace population growth and was influenced by the aging population. Despite growth in vehicle responses the two ambulances added in July of 2016 and the adjusted shift start times in September of 2016 succeeded in improving the overall and hourly peak unit utilization. Unit utilization improved 3.1 per cent from 40.2 per cent in 2015 to 39.0 per cent in 2016. Maximum hourly unit utilization was down 10.9 per cent from a peak of 52.2 per cent at 11am for 2015 compared a peak of 46.5 at 9pm in the fourth quarter of 2016. Across the day unit demand has been rebalanced. Unit utilization of 13 previously less busy hours, 17:00 to 05:59, is now slightly higher, while 11 previously busier hours of the day, 06:00 to 16:59, have much lower unit utilizations.

Indicator Name	Indicator Definition	Year-end (2015)	Year-end (2016)	Per cent change
Number of Vehicle Responses	A measure of service demand. The total number of ambulances or emergency response units (vehicles) that responded to calls dispatched to Region of Waterloo Paramedic Services inside or outside of Waterloo Region. More than one vehicle may respond to a single call; for example, multiple casualty incidents.	45,344	48,577	+7.1%
Rate of Vehicle Responses per 1,000 population	A measure of service demand. The rate of vehicle responses per 1,000 population to calls dispatched to Region of Waterloo Paramedic Services inside or outside of Waterloo Region. More than one vehicle may respond to a single call; for example, multiple casualty incidents.	78.9	82.9	+5.1%
Unit Utilization	Unit utilization measures the per cent of time that ambulances and emergency response units are actively engaged in responding to calls (codes 1 to 4) – as opposed to being deployed waiting for calls. Monitoring resource deployment through unit utilization helps ensure sufficient staffing to meet community needs. When unit utilization exceeds 35 per cent, it becomes difficult to ensure vehicles will be available for the next call within a reasonable time.	40.2%	39.0%	-3.1%



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Number and rate of vehicle responses per 1,000 population, by dispatch priority code and year

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2011 to December 31st, 2016

Number of vehicle responses

Overall priority code	2011	2012	2013	2014	2015	2016	2011→2016
1 – Deferrable	824	805	517	465	164	122	
2 – Scheduled	136	163	162	151	129	119	
3 – Prompt	11,291	11,776	11,218	11,340	13,011	13,066	
4 – Urgent	25,673	27,717	28,341	30,140	32,040	35,270	
Rate per 1,000 (YTD)	68.8	72.7	71.6	74.1	78.9	82.9	
Annual change (%)	5.6%	5.8%	-1.5%	3.5%	6.4%	5.1%	
Total vehicle responses (YTD)	37,924	40,461	40,238	42,096	45,344	48,577	
Annual change (%)	7.0%	6.7%	-0.6%	4.6%	7.7%	7.1%	
Total vehicle responses (annual)	37,924	40,461	40,238	42,096	45,344	48,577	
Annual change (%)	7.0%	6.7%	-0.6%	4.6%	7.7%	7.1%	

Source: ADRS (February 9th, 2017)

■ Lowest value
 ■ Middle value(s)
 ■ Highest value



Region of Waterloo * Paramedic Services

PERFORMANCE MEASUREMENT

Rate of vehicle responses per 1,000 population, by municipality and year

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2011 to December 31st, 2016

Rate of vehicle responses per 1,000, by year, within Waterloo Region		Year-to-date		2016
		2011 → 2016	Min. - Max.	
Cities	Cambridge		67.4 - 89.5	89.5
	Kitchener		76.3 - 89.2	89.2
	Waterloo		53.1 - 64.4	64.4
	Cities total		68.0 - 82.7	82.7
Townships	North Dumfries		60.5 - 83.0	83.0
	Wellesley		36.2 - 43.1	37.8
	Wilmot		58.2 - 68.3	66.1
	Woolwich		66.7 - 77.4	77.4
	Townships total		59.6 - 68.3	68.1
Waterloo Region total			67.4 - 81.0	81.0
Number and proportion of total vehicle Responses outside Waterloo Region*		2011 → 2016	Min. - Max.	2016
Number of vehicle responses			753 - 1,059	1,059 calls
Proportion of total vehicle responses			1.8 - 2.4	2.2 per cent

*A population based rate of calls cannot be accurately calculated for calls outside of Waterloo Region because it is difficult to determine the size of the service population (denominator).

Source: ADRS (February 9th, 2017)



Region of Waterloo * Paramedic Services

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Number and rate of vehicles responses per 1,000 population, by municipality and month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st to December 31st, 2016

Rate of vehicle responses per 1,000, by month, within Waterloo Region		Jan → Dec	Year-to-date (YTD)	
			Rate per 1,000	Total calls
Cities	Cambridge		89.5	12,306
	Kitchener		89.2	21,811
	Waterloo		64.4	8,783
	Cities total		82.7	42,900
Townships	North Dumfries		83.0	831
	Wellesley		37.8	427
	Wilmot		66.1	1,401
	Woolwich		77.4	1,959
	Townships total		68.1	4,618
Waterloo Region total			81.0	47,518
Outside Waterloo Region total*				1,059
Waterloo Region Paramedic Services total*				48,577

* A population based rate of calls cannot be accurately calculated for calls outside of Waterloo Region because it is difficult to determine the size of the service population (denominator).

Source: ADRS (February 9th, 2017)

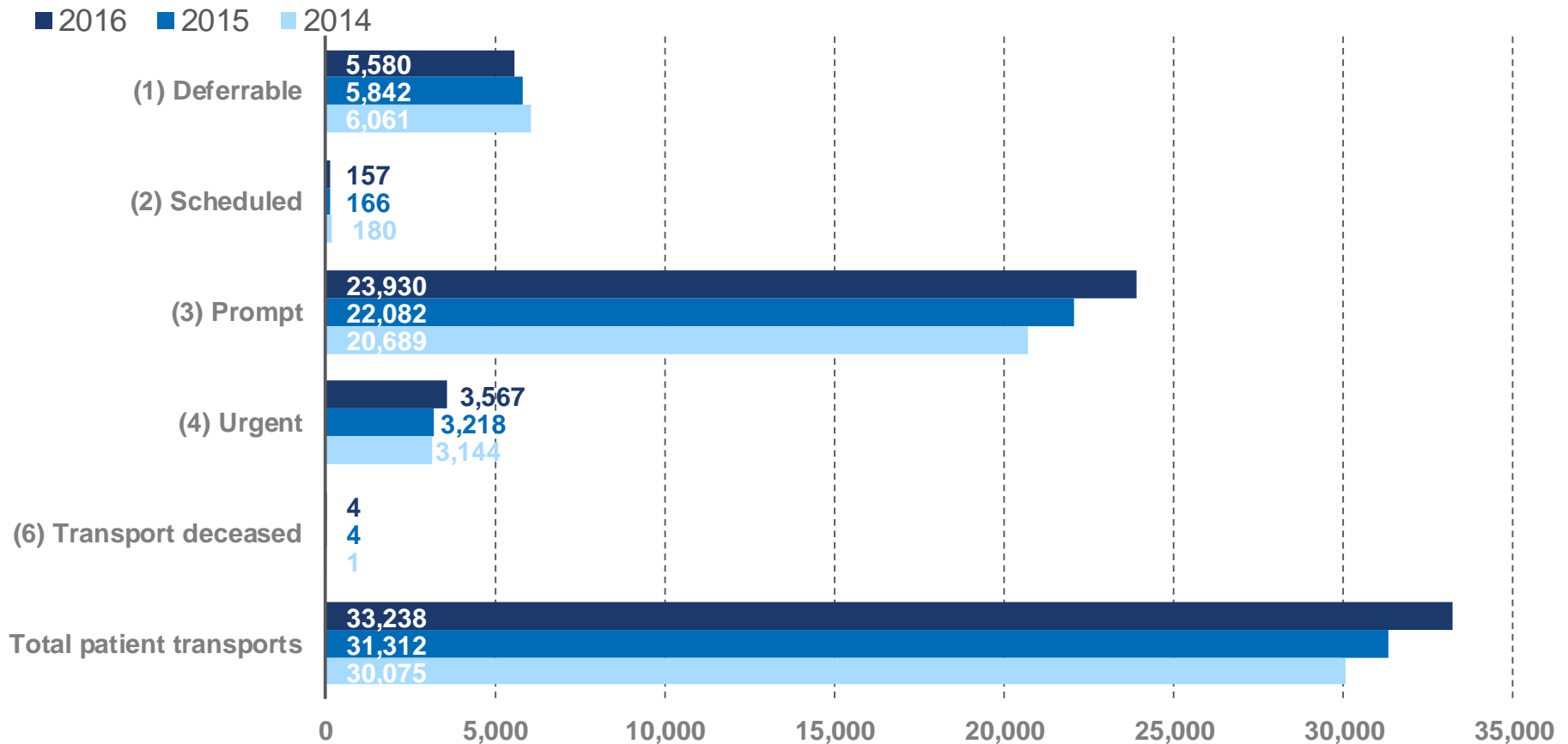
■ Lowest value
 ■ Middle value(s)
 ■ Highest value



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Number of patient transports, by return priority code

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2014 to December 31st, 2016



Source: TabletPCR (February 9th, 2017)



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Various measures of service provided by Region of Waterloo Paramedic Services, by year

Inside and outside of Waterloo Region, January 1st, 2011 to December 31st, 2016

Measure	2011	2012	2013	2014	2015	2016	2011 → 2016	Per cent change (2011-2016)
Number of unique calls (T1, code 1-4)	33,675	35,504	35,229	37,232	39,384	42,187		25.3
Number of vehicles dispatched (T2, code 1-4)	37,924	40,461	40,238	42,096	45,344	48,577		28.1
Number of vehicles arriving on scene (T4, code 1-4)	34,427	36,341	36,373	37,884	40,352	43,400		26.1
Number of vehicles transporting patients (T6, code 1-4)	25,229	26,648	27,408	29,143	30,645	32,720		29.7
Number of patients transported (T6, code 1-4)	25,551	26,948	28,725	29,425	30,989	33,064		29.4
Per cent of vehicles dispatched arriving on scene	90.8	89.8	90.4	90.0	89.0	89.3		-1.6
Per cent of vehicles arriving on scene transporting patients	73.3	73.3	75.4	76.9	75.9	75.4		2.9

Note that due to differences between the ADRS and TabletPCR data sources, there may be variance between similar indicators.

Source: ADRS (February 9th, 2017)

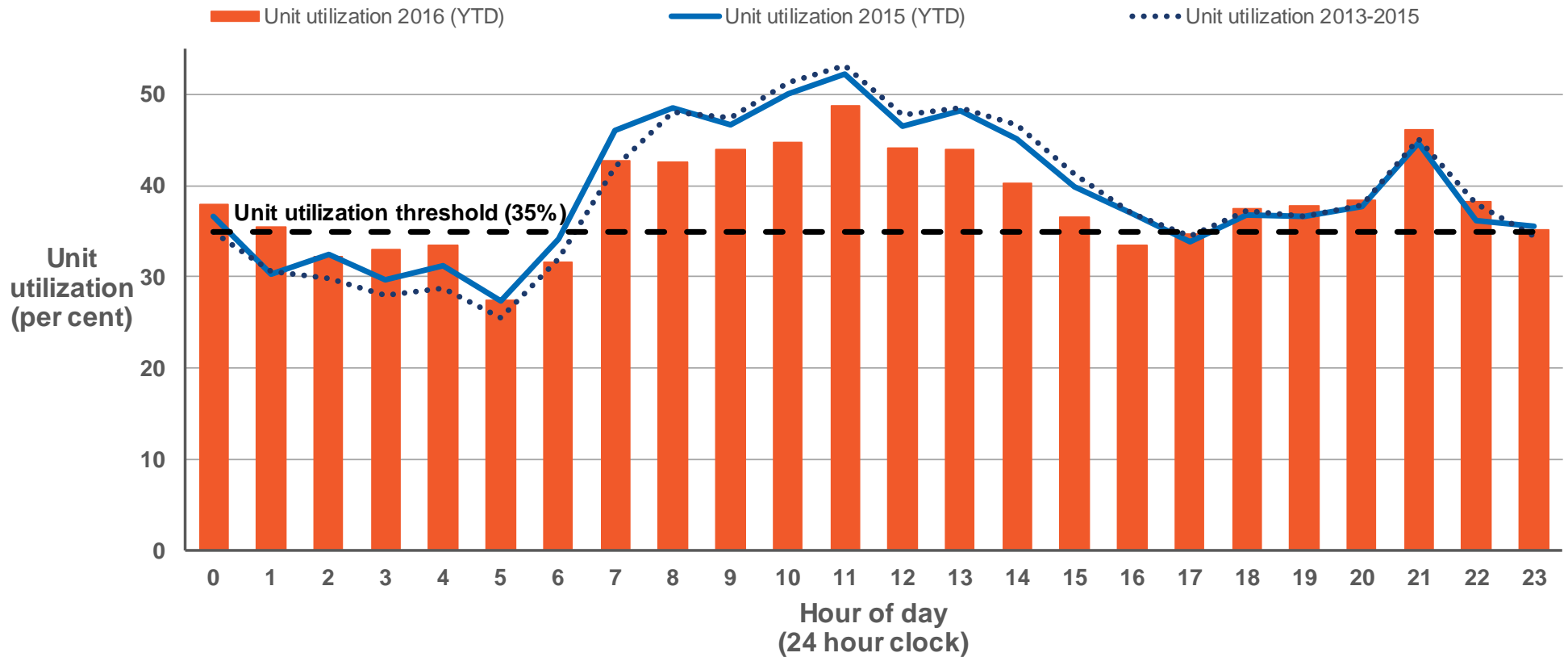
Lowest value
 Middle value(s)
 Highest value



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Unit Utilization, by hourly average (24 hour clock)

Region of Waterloo Paramedic Services, January 1st, 2013 to December 31st, 2016



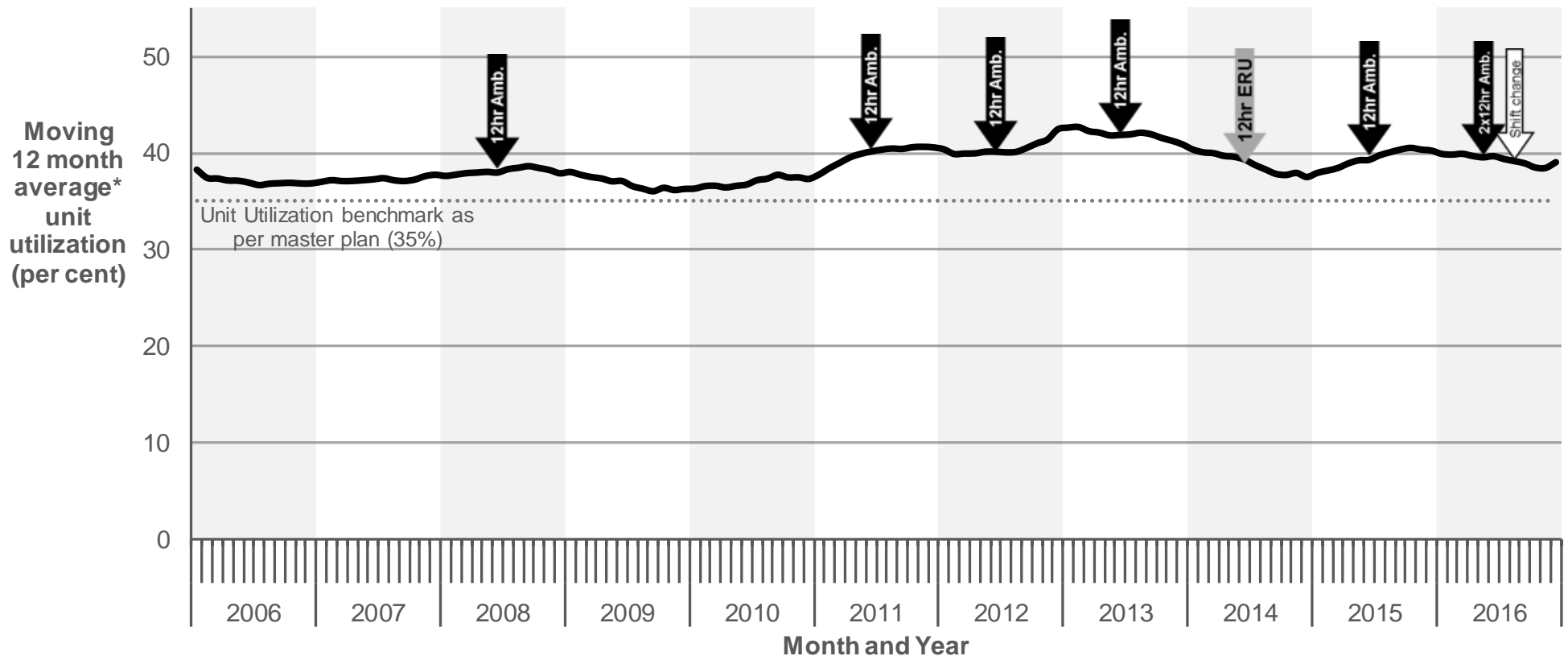
Source: ADRS (February 9th, 2017)



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Moving 12 month average* Unit Utilization

Region of Waterloo Paramedic Services, January 1st, 2006 to December 31st, 2016



*The moving 12 month average unit utilization averages the unit utilization for the current month, and the previous 11 months, for each time point. For example, December 2016's value (39.0) means that, on average, ambulances were in use 39.0 per cent of each month from January 2016 to December 2016. The moving average reduces the often large changes seen from month to month allowing for trends to be seen clearly. **A decreasing trend is considered positive, while an increasing trend is seen as a negative.**

Source: ADRS (February 9th, 2017)



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B. Compliance and Quality Assurance Indicators

Definition of Indicator Group

Indicators that monitor Paramedic Services' adherence to internal process, procedure, legislated mandates etc. (how well did we do it?).

Summary of Results

For 2016 the 80th percentile response time to emergency calls (code 4) within Waterloo Region was 9 minutes and 37 seconds, 2.0 per cent (15 seconds) faster than 2015. Response times were influenced by the two ambulances added in July of 2016 and the adjusted shift start times in September of 2016 despite by the growing number of call responses. Using an informal benchmark Paramedic Services monitors response times observed from urban, suburban, and rural perspectives as defined by call density. Response times vary according to population and road density. Drives times are longer in rural areas. Compliance to the 2016 response time performance plan improved for the most urgent call types and worsened for the less urgent call types indicating that the most urgent calls are being given a more appropriate priority and are being attended to faster. Setting faster times for more urgent calls and progressively slower times for less urgent calls is a standard approach.

Indicator Name	Indicator Definition	Year-end (2015)	Year-end (2016)	Per cent change
Paramedic Services Response Time to Emergency Calls	A measurement of the Paramedic Services' ability to meet performance a summary performance indicator, response time to code 4 calls, 80 th percentile.	9min 49sec	9min 37sec	-2.0%
Response Time Performance Plan Compliance Resuscitation calls (CTAS1)	Resuscitation calls involve conditions that are, or may pose, an imminent threat to life or limb or risk of deterioration requiring immediate aggressive interventions; ideal physician assessment is immediate. The current target for resuscitation calls is a response time of 8 minutes or less 70 per cent of the time or better. A high proportion of compliance indicates that the most urgent calls are being attended to in the appropriate time frame.	68.4%	71.7%	+4.9%
Response Time Performance Plan Compliance Emergent calls (CTAS2)	Emergent calls involve conditions that potentially threaten to life, limb or function, requiring rapid medical interventions or delegated acts; ideal physician assessment is within 15 minutes. The current target for emergent calls is a response time of 10 minutes or less 80 per cent of the time or better.	77.7%	79.0%	+1.6%

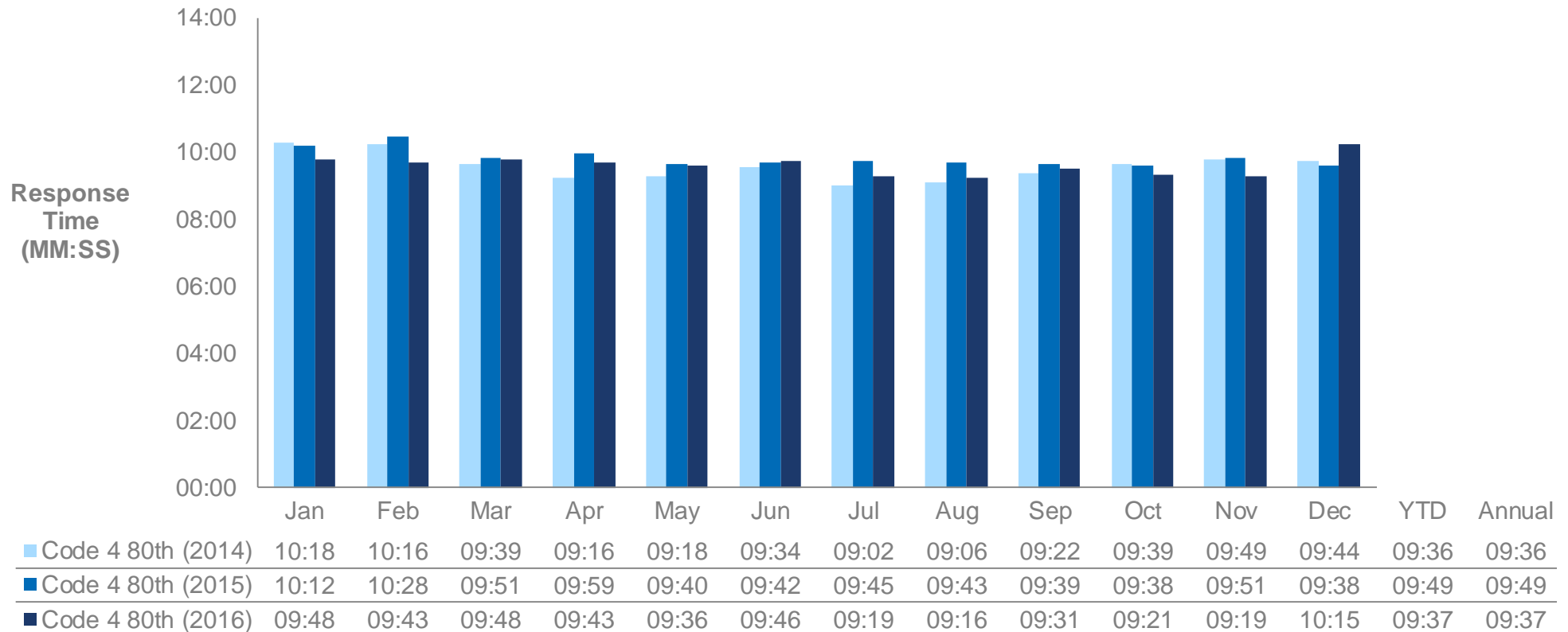


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Response time to emergency calls (code 4), 80th percentile, by month

Any paramedic service, inside Waterloo Region, January 1st, 2013 to December 31st, 2016



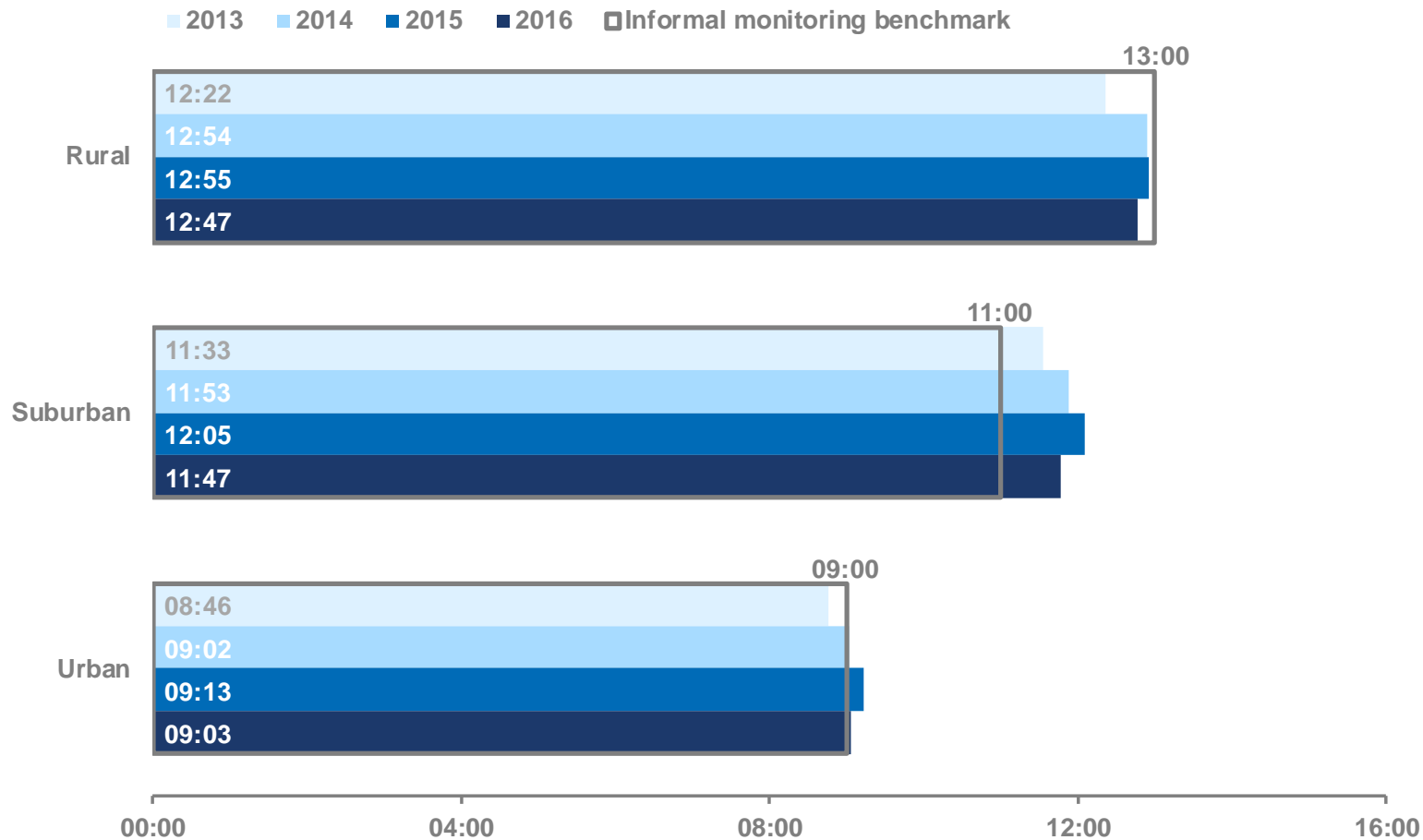
Sources: ADRS (February 9th, 2017)



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Response time to emergency calls (code 4), 80th percentile, by vehicle response density

Any paramedic service, inside Waterloo Region, January 1st, 2013 to December 31st, 2016



Source: ADRS (February 9th, 2017)



Region of Waterloo * Paramedic Services

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Compliance to 2016 response time performance plan, by Canadian Triage Acuity Score (CTAS)

Region of Waterloo Paramedic Services, inside or outside of Waterloo Region, January 1st, 2015 to December 31st, 2016

Type of call	Response Time Target Paramedic Services notified (T2) to arrive scene (T4)	Approved 2016 Region of Waterloo target	2015		2016	
			Per cent compliance	Percentile time (mm:ss)	Per cent compliance	Percentile time (mm:ss)
Sudden Cardiac Arrest	Defibrillator response in 6 minutes or less (set by MOHLTC)	50% or better (Paramedic Services only)	38%	06:55	40%	06:47
CTAS 1	Paramedic Services response in 8 minutes or less (set by MOHLTC)	70% or better	68%	08:15	72%	07:50
CTAS 2	Paramedic Services response in 10 minutes or less	80% or better	78%	10:24	79%	10:10
CTAS 3	Paramedic Services response in 11 minutes or less	80% or better	78%	11:26	79%	11:06
CTAS 4	Paramedic Services response in 12 minutes or less	80% or better	79%	12:15	81%	11:46
CTAS 5	Paramedic Services response in 12 minutes or less	80% or better	78%	12:24	78%	12:27

Source: ADRS and TabletPCR (February 9th, 2017)

C. Efficiency Indicators

Definition of Indicator Group

Indicators that outline how timely Paramedic Services is being performed by staff and offered to the Region (how well did we do it?).

Summary of Results

For 2016, ambulance days lost to offload delay declined 38.9 per cent from 2015; a savings of nearly 60 days with most of the improvement occurring between January and September. From October through December ambulance days lost to offload delay tripled from 11.3 days in the third quarter to 34.8 days in the fourth quarter; a 208 per cent increase. The increase was largely due to an intense start to cold and influenza season increasing call response volume. Paramedic Services and local hospitals continue to collaborate closely to address the issue of offload delay to limit its effects on Paramedic Services. Collaboration on new and innovative strategies to address offload delay and return crews to the public for re-assignment helps to limit our offload delay losses. Time spent in code yellow and code red in 2016 declined 26.2 per cent and 41.8 per cent respectively compared to 2015. Time spent in code yellow and code red increased greatly in the fourth quarter of 2016, particularly in December, and are up 122.8 and 469.2 per cent respectively from the third quarter. Despite the worsening efficiency indicators in the fourth quarter of 2016 the effects on quality and timeliness of patient care were limited due to the two additional 12-hour ambulances added in July of 2016 and the scheduling adjustment of another 12-hour ambulance in September 2016.

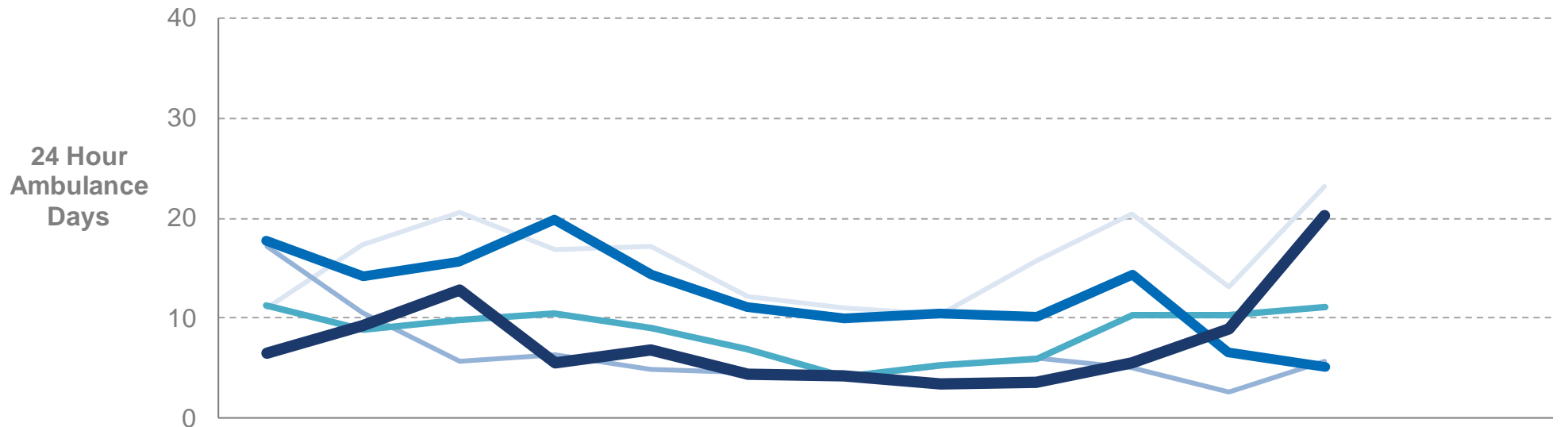
Indicator Name	Indicator Definition	Year-end (2015)	Year-end (2016)	Per cent change
Offload Delay Measurement	The amount of 24 hour ambulance days lost to offload delay over the course of a month.	150.0 days	91.6 days	-38.9%
Code Yellow Status	The percentage of time where Paramedic Services is in a Code Yellow Status for the month (\leq three vehicles available).	13.3%	10.5%	-21.6%
Code Red Status	The percentage of time where Paramedic Services is in a Code Red Status for the month (zero vehicles available).	1.1%	0.6%	-42.0%



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Number of ambulance days lost to offload delay, by month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2012 to December 31st, 2016

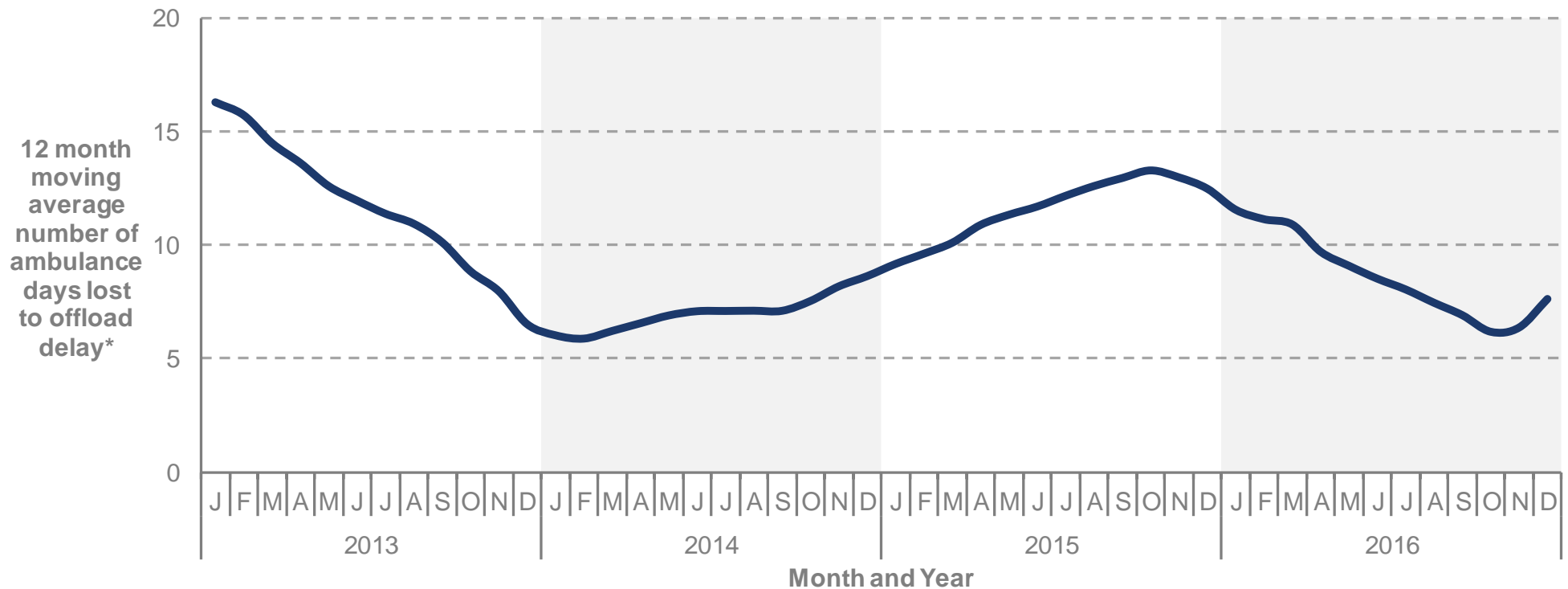


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD total	Annual total
— 2012	11.1	17.4	20.6	16.9	17.1	12.3	11.1	10.5	15.8	20.5	13.2	23.2	189.7	189.7
— 2013	17.2	10.6	5.8	6.4	4.9	4.6	4.1	5.2	6.0	5.1	2.6	5.8	78.2	78.2
— 2014	11.3	8.8	9.8	10.5	9.0	6.9	4.3	5.3	6.0	10.3	10.3	11.2	103.7	103.7
— 2015	17.7	14.2	15.7	19.9	14.4	11.2	9.9	10.5	10.2	14.4	6.6	5.2	150.0	150.0
— 2016	6.6	9.2	12.8	5.5	6.9	4.4	4.2	3.4	3.7	5.6	8.9	20.4	91.6	45.7

Source: TabletPCR (February 9th, 2017)

12 month moving average number of ambulance days lost to offload delay, by month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2013 to December 31st, 2016



*The moving 12 month average offload delay is calculated by averaging the total offload delay, in days, for the current month and the previous 11 months for each data point. In other words, on average, 7.6 days of offload delay were experienced each month from January 2016 to December 2016, an improvement of 38.9 per cent from December of 2015, but a worsening by 19.0 per cent since the start of the fourth quarter. The moving average reduces the variation from month to month and allows trends to be seen more clearly. For offload delay, a decreasing trend is considered positive, while an increasing trend is seen as negative.

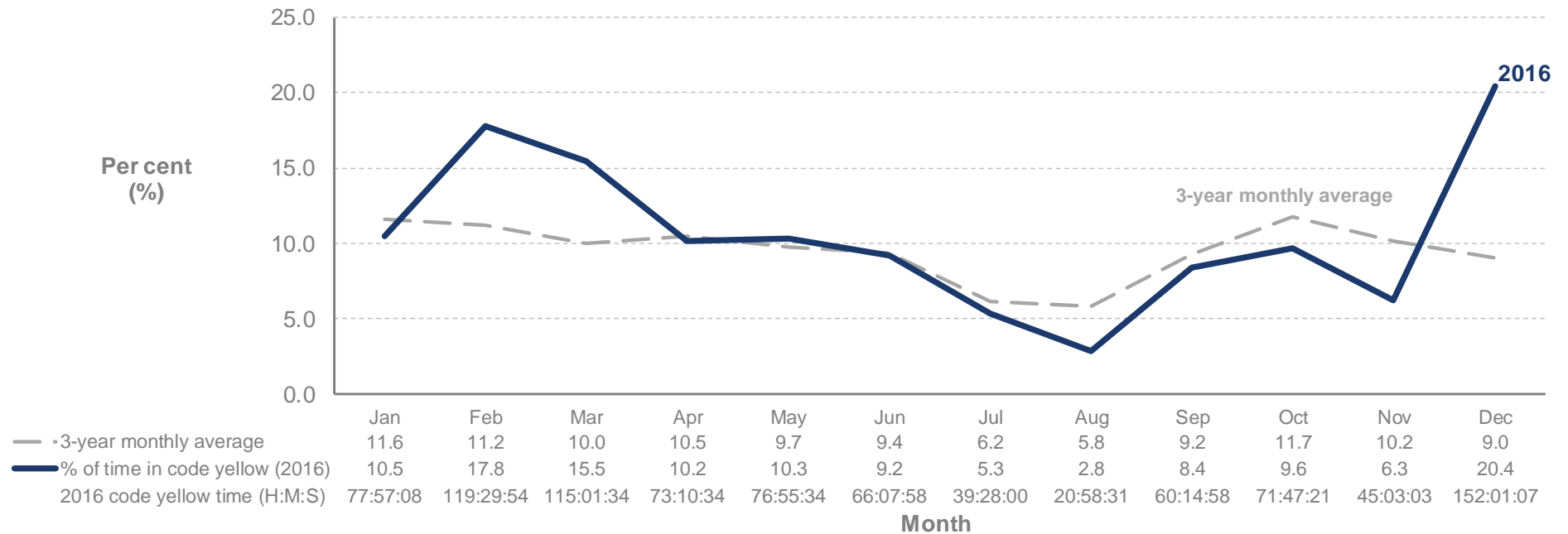
Source: TabletPCR (February 9th, 2017)



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Percentage of time in code yellow status, by month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2013 to December 31st, 2016



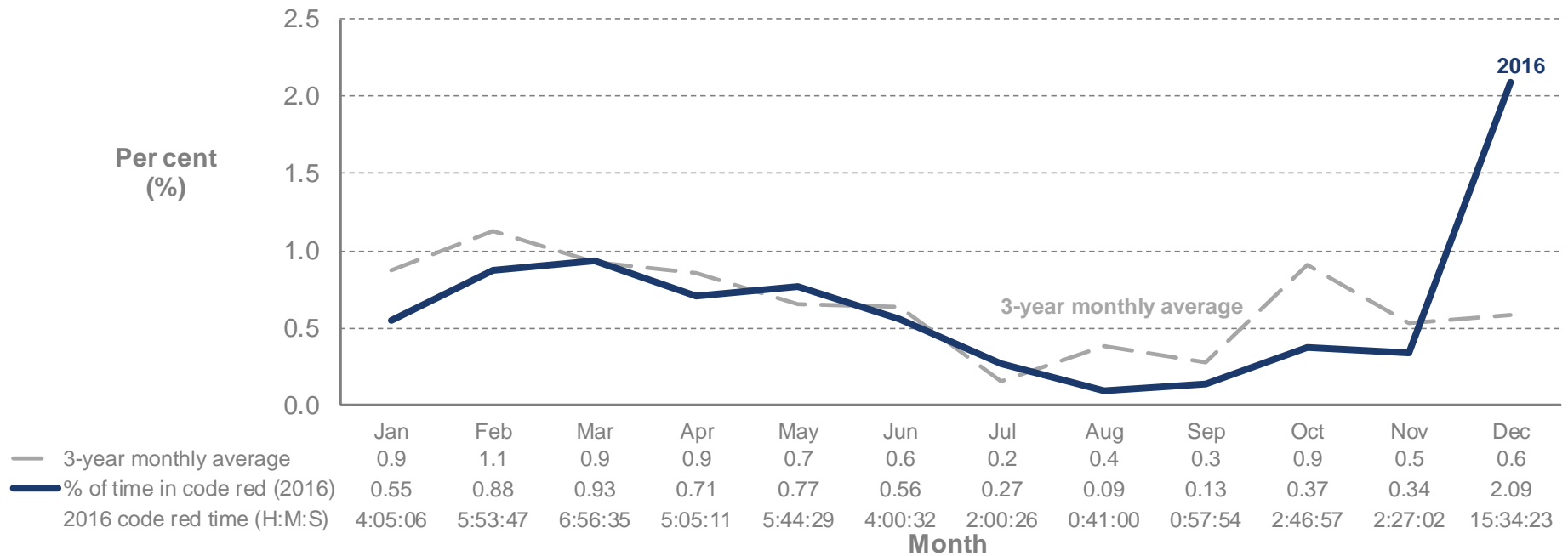
Source: CACC (February 9th, 2017)



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Percentage of time in code red status, by month

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2013 to December 31st, 2016



Source: CACC (February 9th, 2017)



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D. Service and Quality Impact Indicators

Definition of Indicator Group

Indicators that measure not only the timely provision of service, but how well that service is being provided by Paramedic Services' staff (How well is the service being performed?).

Summary of Results

Note that service type indicators tend to fluctuate around the average over time, particularly when a small number of cases are involved. The percentage of stroke patients taken to stroke facilities improved 3.3 per cent from 2015. Results for the return of spontaneous circulation (ROSC) indicator also improved in 2016, up 4.7 per cent, compared to 2015. As any return of spontaneous circulation is deemed to be positive, results are in an acceptable range (variation is normal due to the small number of cases). Heart attack STEMI (ST-segment elevation myocardial infarction) protocol compliance (providing care in less than 90 minutes) was 58.5 percent, well below the historical average of 70.0 per cent for the year-to-date (variation is expected for heart attack STEMI due to the numerous variables involved).

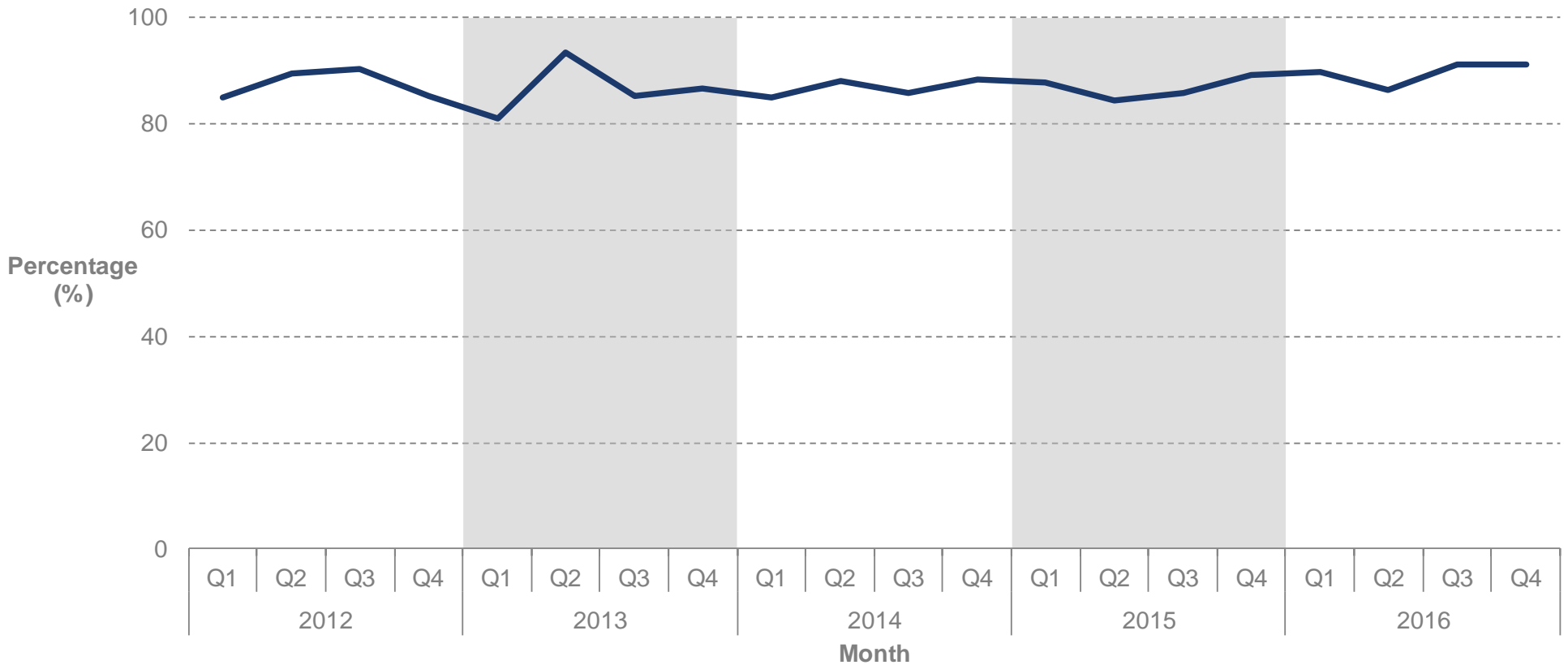
Indicator Name	Indicator Definition	Year-end (2015)	Year-end (2016)	Per cent change
Stroke Patient to Stroke Facilities	The percentage of stroke patients taken to Provincial Stroke Facilities. *Note that 'stroke protocol' outlines that only patients with certain symptoms and within certain timelines are transported to a stroke facility. Due to this, a variance under 100% may not necessarily represent a missed target.	86.9%	89.7%	3.3%
Return of Spontaneous Circulation (ROSC)	The percentage of cardiac arrest patients with the return of pulse.	13.5%	14.1%	4.7%
Heart attack (STEMI) Protocol ST-Segment Elevation Myocardial Infarction	The percentage of STEMI patients where care was provided in less than 90 minutes ('STEMI' represents a type of heart attack). *Note that indicator results are shared among Paramedic Services and St. Mary's Hospital. Paramedic Services can only control time from patient contact to arrival at St. Mary's Hospital; the remaining time to the 90 minute target is Hospital dependent.	62.3%	58.4%	-6.1%



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Percentage of stroke patients transported to a stroke facility[†], by quarter

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2012 to December 31st, 2016



[†]Stroke facilities include: Grand River, Brantford General, Hamilton General, Stratford General, and Guelph General.

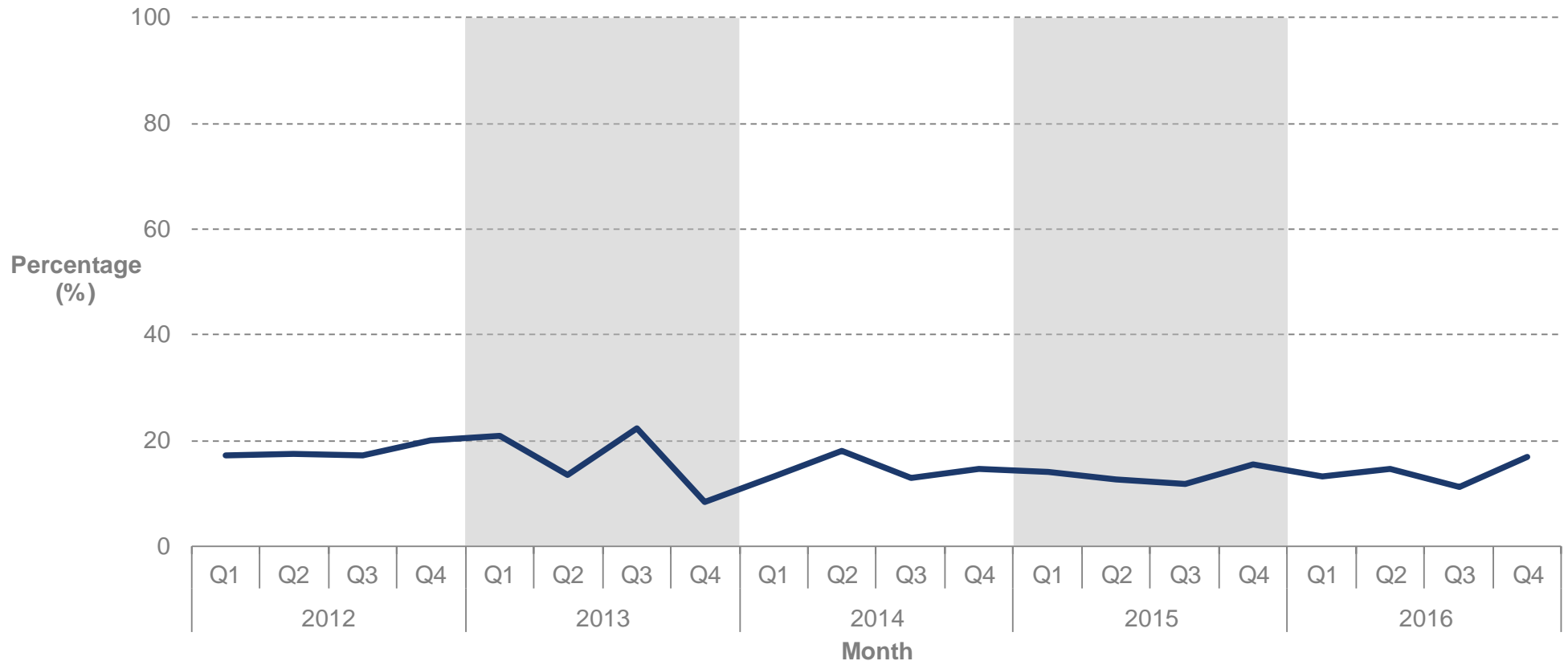
Source: TabletPCR (February 9th, 2017)



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Percentage of cardiac arrest patients with return of spontaneous circulation (ROSC), by quarter

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, January 1st, 2012 to December 31st, 2016



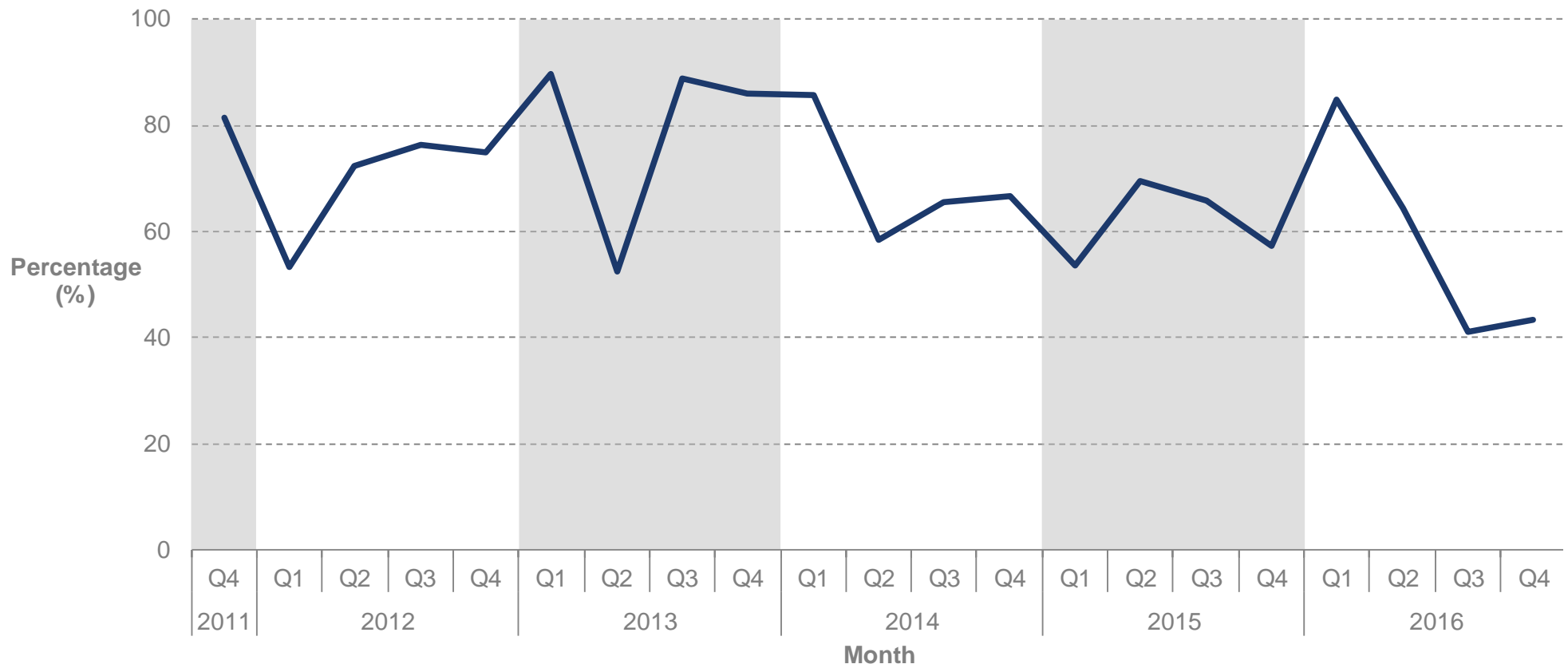
Source: TabletPCR (February 9th, 2017)



Region of Waterloo * Paramedic Services PERFORMANCE MEASUREMENT

Percentage of heart attack patients where care was provided in less than 90 minutes (STEMI protocol), by quarter

Region of Waterloo Paramedic Services, inside and outside of Waterloo Region, September 1st, 2011 to December 31st, 2016



Source: St. Mary's Hospital (February 9th, 2017)

E. GLOSSARY

ADRS: Ambulance Dispatch Reporting System

CACC: Central Ambulance Communications Centre

Call density: A 1km x 1km grid was overlaid across Waterloo Region so each call could be assigned a grid square based on its location. The total number of calls and an average per month calculated for each grid square. Grid squares were then assigned one of three classes:

Urban - A grid square was classed as urban if there were more than two calls per month per square kilometer and at least half of its neighbouring grid squares were of the same density or higher.

Suburban - A grid square was classed as suburban if there were less than or equal to two calls and more than 0.5 calls per month per square kilometer and at least half of its neighbouring grid squares were of the same density or higher.

Rural - A grid square was classed as suburban if there were less than or equal to 0.5 calls and more than 0.08 calls per month per square kilometer and at least half of its neighbouring grid squares were of the same density or higher.

Cardiac Arrest: A sudden, sometimes temporary, cessation of the heart's functioning.ⁱ

Code 1 (Deferrable): A routine call that may be delayed without detriment to the patient (e.g. a non-scheduled transfer; a minor injury).ⁱⁱ

Code 2 (Scheduled): A call which must be done at a specific time, for example because of special treatment or diagnostic facility requirement (e.g. inter-hospital transfers or a scheduled meet with an air ambulance).ⁱⁱⁱ

Code 3 (Prompt): A call that should be performed without delay (e.g. serious injury or illness).^{iv}

Code 4 (Urgent): A call that must be performed immediately where the patients 'life or limb' may be at risk (e.g. Vital Signs Absent patient or unconscious head injury).^v

Code Red: When the Region of Waterloo Paramedic Services is at a level where no ambulances are available to respond to the next emergency call and no out of town services are immediately available to assist.^{vi}

Code Yellow: When the Region of Waterloo Paramedic Services is at minimum coverage of three vehicles or less.^{vii}

CTAS Level: The ‘Canadian Triage & Acuity Scale’ is used to assign a level of acuity to a patient. Acuity refers to the gravity of the situation – the potential for death and/or irreversible illness. CTAS is a tool that more accurately defines the patient’s need for care. Assignment of the CTAS level is to be based upon not only the presenting complaint identified on the initial assessment made by the paramedic, but also on their examination findings, and response to treatment.^{viii}

Defibrillator: An electronic device that applies an electric shock to restore the rhythm of a fibrillating heart.^{ix}

Dispatch Priority Code: The priority code number that is assigned to the call by the dispatcher. It identifies the priority under which the ambulance responds to the call location (e.g. an urgent response would be entered as Code 4).^x

Emergency Calls: Based on dispatch priority only. Emergency calls are categorized as Code 4 (Urgent).

Indicator: A defined part of a program/team/system that is deemed important to measure and provide “specific information on the state or condition of”, as it contributes to the efficient and effective achievement of an outcome.^{xi}

MBNCanada: Municipal Benchmarking Network Canada, formerly the Ontario Municipal Benchmarking Initiative (OMBI), is a partnership between Canadian municipalities for the purpose of fostering and supporting a culture of service excellence through the identification, creation, and collection of consistent and comparable performance data, and the sharing of operational best practices and collaboration on creative solutions to improve performance.

Offload Delay: Offload delay measures the offload of patients at local hospitals, which can impact the resources required and availability to respond to calls.^{xii}

Patient Transport(s): The total number of patients carried in the ambulance during a given call.^{xiii}

Performance Measurement: A method to monitor, observe and describe program implementation. It portrays information to tell that outputs are being delivered as planned, and gives an idea of whether outcomes are occurring. It provides information to be used for evaluation.^{xiv}

Response: See vehicle response.

Response Time: Response time means the time measured from the time a notice is received to the earlier of either the arrival on-scene of a person equipped to provide any type of defibrillation to sudden cardiac arrest patients or the arrival on-scene of the ambulance crew.^{xv}

Return of Spontaneous Circulation: Signs of the return of spontaneous circulation (ROSC) include breathing (more than an occasional gasp), coughing, or movement. For healthcare personnel, signs of ROSC also may include evidence of a palpable pulse or a measurable blood pressure.^{xvi}

Return Priority Code: The priority code number that is assigned to the call by the ambulance crew. It identifies the priority under which the patient is transported (e.g. a prompt return to a medical facility would be entered as a Code 3).^{xvii}

STEMI: A STEMI (ST-Segment Elevation Myocardial Infarction) is a specific type of myocardial infarction (MI), or in other words a type of heart attack, which demonstrates characteristic ECG (electrocardiogram; a tool to measure electrical activity of the heart) changes including marked elevation in the ST-segment in the cardiac cycle.^{xviii}

STEMI Facilities: A hospital that houses onsite Percutaneous Coronary Intervention (PCI) facilities with an experienced interventional team.^{xix}

Stroke Facilities: Stroke facilities are based on a collaborative model of 11 regional stroke networks. Each regional network is comprised of a Regional Stroke Centre (RSC), District Stroke Centres (DSCs) and community hospitals. The regional stroke networks are collaborative partnerships of care providers that span the care continuum from prevention to community re-engagement. The goal is to coordinate equitable access and improve outcomes for stroke survivors.^{xx}

T1: The time point when a call is entered in to the queue at the Central Ambulance Communications Centre and is available for dispatch.

T2: The time point when ambulance/response unit is notified by the Central Ambulance Communications Centre of a call.

T4: The time point when an ambulance/response unit arrives at the dispatched call's location/scene. This is not the time point when a paramedic is at the patient's side.

T6: The time point when an ambulance arrives at its destination (e.g. hospital).

TabletPCR: An internal tool used to track information and data relevant to calls and patient care reporting.

Unit Utilization: Percentage of staffed vehicles utilized during any unit of time.^{xxi} Note that when UU exceeds a value of 40 per cent, it becomes difficult to ensure an ambulance will be available for the next call in a reasonable time.



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Vehicle response: A vehicle response is generated when an ambulance or emergency response unit is dispatched to a call; there can be more than one vehicle response per call (multiple ambulances/emergency response units assigned to the same call; for example, multi-casualty incidents).

YTD: Year-to-date refers to the period extending from the beginning of the current reporting year (January 1st) to the end of the reporting period. For the Year-end report's end date is December 31st, and the year-end report's end date is December 31st.



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PERFORMANCE MEASUREMENT

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Accessible formats of this document are available upon request. Please call the Coordinator, Health Communications at 519-575-4400 ext. 2244, (TTY 519-575-4608) to request an accessible format.

Notes

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- ⁱⁱ Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ⁱⁱⁱ Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ^{iv} Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ^v Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 9.
- ^{vi} Region of Waterloo. Public Health. Emergency Medical Services. 2011 EMS System Performance. Report PH-12-017. File Code P 05-80. Waterloo: Region of Waterloo, May 8, 2010. Web. 14 August 2013.
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- ^{ix} “Defibrillator”. *Merriam-Webster*. Merriam Webster, Incorporated, 2013. Web. 13 August 2013.
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- ^{xi} “Definition of indicator in English”. *Oxford Dictionaries*. Oxford University Press, 2013. Web. 14 August 2013.

- ^{xii} “What is Service?”. *OMBI Ontario Municipal CAO’s Benchmarking Initiative*. Ontario Municipal CAO’s Benchmarking Initiative, 2012. Web. 13 August 2013.
- ^{xiii} Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 11.
- ^{xiv} Schacter, Mark. Kronick, Murray. “Results-Based Management 101”. *Performance and Planning Exchange*. Performance and Planning Exchange, 2010-2011. Web. 14 August 2013.
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- ^{xvii} Government of Ontario, Ministry of Health and Long-Term Care, Ambulance Call Report Completion Manual (Ontario: Government of Ontario, 2003) 10.
- ^{xviii} “Cardiac Care STEMI Program Frequently Asked Questions”. *Toronto EMS News & Video*. Toronto Emergency Medical Services, 1998-2013. Web. 13 August 2013.
- ^{xix} “CCN Documents Optimizing Access to Primary PCI for ST Elevation Myocardial Infarction”. *Cardiac Care Network*. Cardiac Care Network of Ontario, 2013. Web. 14 August 2013.
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